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CENTRAL INTELLIGENCE AGENCY
Senior Research Staff on International Communism

The attached outline summarizes a speech given before the Scientific Research Group of the Office of Civil Defense Mobilization, Battle Creek, Michigan, on 2 March 1961. It was followed by several hours of discussion, amplifying and developing the points made in the speech.

The views expressed are those of 25X1A9a [redacted] They have benefited from "inputs" and "feedback" from members of the Life Sciences Division, DDI/OSI.

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CENTRAL INTELLIGENCE AGENCY
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SOVIET SCIENTIFIC POLICY

25X1A9a

Outline of Speech Delivered by [redacted] before the Scientific Research Group, Office of Civil Defense Mobilization, Battle Creek, Mich.
2 March 1961

Introduction

There is no Soviet "scientific policy" as such (nor, for that matter, economic, military, or other separate "policy.") The only real policy of the CPSU is to bring about the "transition to Communism."

1. What is the "transition to Communism?" The USSR has long since completed the building of socialism and is embarked on the fullscale process of building a Communist form of society. Among the other 11 members of the "world socialist system" there is an uneven progress toward the goal of completed socialism. It appears that Czechoslovakia has now "arrived" at this goal but there is a great disparity of levels and background among the others. Khrushchev has held that there will be a gradual elimination of this disparity so that the final entry into Communism will be "almost simultaneous." The question arises - how far behind is Communist China at this point? Both the CPSU and the CPC are studiously vague at this point so that one may infer a lag of as much as 20 or 30 years, but at the same time there is a prospect that the gap may be closed or narrowed much more quickly. At any rate, the CPSU has definitely committed itself to issue a new program for the transition to Communism at the XXII Party Congress to be held in October. If this promise is held it will be the first new program for the Party since the 1920s, and hence would be an event of great moment.

II. Basic Factors in Building Communism

A. Ideology

Ideology is not mere abstract doctrine but is the "creative" interaction of theory and practice. In scientific terms this is interpreted as the construction or simulation and the testing of models, utilizing the feedback from the tests to modify the model - operations research. Communists insist that dialectical materialism is the necessary framework of all true science and are currently making sharp attacks on relics of idealism, positivism, empiricism, and other Free World aberations."

B. The Material Base

In laying the foundations for Communism it is necessary to have a vast development of the economy to a high level of abundance in order to be able to provide "to each according to his needs," not "according to his wants." This aspect of the transition is reflected in considerable increase in the provision of consumer goods for the Soviet population, a trend which, however, is held in check by the application of "comradely criticism" supported by disciplinary action, in cases of over-concern with bourgeois types of material gratification. The magnitude of the Soviet economic achievement is increasingly appreciated in the Free World, though there may still be a tendency to under-estimate its massive potential. The compounding of reinvestment in heavy industry with great technological progress, especially in the fields of automation, holds out the prospect of as yet unguessed economic sputniks. Important efforts are being made to rationalize economic planning of the Soviet Union through less ideologically slanted consideration of "capitalist" factors such as cost accounting and obsolescence, consumer choice and price. From visible Soviet successes we appear to be learning slowly the lesson that a planned economy is not necessarily less efficient than one whose ideology has an anti-planning bias built into it.

C. The Scientific Technical Base

1. The "permanent sputnik."

The aim of Soviet scientific planners is to assure an uninterrupted surge forward, punctuated by occasional major breakthroughs. This is covered in the so-called perspective plan of Soviet science. We have noted that there can be only one science, that of building Communism, which rests on the article of faith that Marxism-Leninism is science.

2. The central, all-pervading role of the party.

This has grown steadily since the time of Lenin. A major landmark emerged about 1936, at which time Stalin launched the massive scientific technical education program which has been carried down to the present. Another landmark was the accession to supreme power of Khrushchev himself, especially 1956 and early 1957, at which time certain major breaks with Stalinist scientific policies began to be noticeable. Today 40% of the Presidium members have had a scientific or technical education or experience. The next generation will be even stronger. Both Khrushchev's daughter and son-in-law are scientifically trained, and there is ample evidence that Khrushchev himself, though not adept in science, fully understands its significance and potential for the regime.

3. Total Organization of Science.

Here the most striking feature is the parallelism of State system of Ministries and the Academy of Science structure. How to improve this complex was the subject of a major debate launched by Khrushchev himself in 1959 which is still going on.

a. The Academy of Sciences of the USSR which has counterparts in the satellites and Communist China, stands at the head of a hierarchy of Union Academies and scores of dependent institutes.

b. Overall coordination problems are handled by:

(1) A system of councils, about 70 in number, under the jurisdiction of the State Committee for Coordination of Research, Council of Ministers. Their task is to stimulate research on a wide variety of programs, hence many of the councils appear to be ad hoc in nature. Others are more permanent, such as the Councils for research on the Soviet Northern regions, on atomic energy matters, cybernetics, etc.

(2) State committees, 5 or 6 in number, and Gosplan which come under the jurisdiction of the Council of Ministers, USSR. In addition to the one mentioned above there are others which deal with the application of research and have taken over much of the guidance of specialized institutes, design bureaus and pilot plants. For example, the State Committee for Automation and Engineering chaired by Anatoliy Kostousov heads 57 research institutes, 25 design offices, 7 design institutes, and 26 experimental plants.

c. Many of the industrial enterprises under decentralized control at the Sovnarkhoz level have developed institutes for the application of research to production. There is currently some debate as to the relationship of these activities to the central system described above.

D. The Resources Available for Soviet Science are Tremendous

1. There is a vast administrative apparatus supporting the main elements described above.

2. Very large funds are available. These are increasing at the rate of about 15% per annum. It is clear that money is no object where priority fields are concerned.

3. Scientific cadres are growing at the rate of 10% per annum. New centers are constantly being built or projected with special emphasis on Siberia. There is apparently increasing bloc coordination of science typified in the joint atomic energy research center at Dubna where satellite and Chinese Communist scientists play an important role.

4. Supporting services include abstracting of foreign and domestic scientific journals on a vast scale. The Referativnyy Zhurnal publishes over half a million abstracts per year. In general Soviet scientific publication is more highly organized than here; it has recently averaged nearly a million pages a year.

5. There is a new openness to foreign scientific influence. One of the chief benefits of the end of Stalinist orthodoxy was what amounts to the principle that "anything goes" in science, so long as it does not violate basic ideology, and even this provision seems to be somewhat more liberally interpreted.

6. Freedom of scientists in their specific disciplines is greatly increased. They are still governed by a basic taboo against involvement in politics as such, though as we have seen more and more of the political functionaries have scientific or technological background. This combination of receptivity to foreign influence and general freedom of

discussion in specialized and non-political fields has been noticed by hundreds of free world scientists in exchanges during recent years.

E. Priorities

It is important to note that the "perspective plan," does not consider separate scientific disciplines but rather priorities. This plan has been described as a "Chinese box of problems."

1. The center box as we have seen is the building of communism.

2. Surrounding this are 4 top general priorities:

(a) Release and control of atomic energy.

(b) The synthesis of new products - foods and fabrics.

(c) Purposeful intervention in the organic cell which "opens whole new areas."

(d) Science underlying automation and based on the "modeling of the human brain."

3. The outer group consists of 30 more specific priorities which were listed in an important speech by the Vice President of the Academy of Sciences, Topchiyev (1959). These range in orderly sequence from the basic physical biological and behavioral sciences to the area we would call social science, i.e. economics and sociology, and finally to what we would call the humanities, including linguistics and the arts. The specific tasks under these 30 priorities are being worked out in infinite detail with subdivision of labor down to the Republic and lesser institute levels.

III. The Unity of Sciences and the Creation of a New Society and a "New Man" - the Communist Novum Organum.

A. The Dominant Discipline is Cybernetics and Control Theory

This is a complex flourishing discipline throughout the advanced scientific world and ties in closely with what we now call "systems theory." There is abundant evidence that the Soviets are making a major thrust forward throughout this field. (The Communist Chinese have a considerable potential in this area).

B. The Application of Cybernetics to the Conditioning Process of Pedagogy.

Here lies a whole complex area of scientific disciplines beginning with the study of the cell, working through the higher nervous system, physio-psychology, heredity, genetics, and pre-natal influence, leading into the field of experimental psychology and pedagogy.

Here too a huge organizational structure supports the discipline, chiefly the Institute of Automatics and Telemechanics, the Academy of Pedagogical Sciences; at the apex of the pyramid stands the Academy of Social Science which is a direct offshoot of the Central Committee of the Party. (It is worth noting that Khrushchev's important 6 January 1961 speech on the Moscow Statement of December 1960 was delivered before the party aktiv of this Academy).

IV. The End Product is Held Forth in the Ideal of the "New Soviet Man."

Soviet spokesmen are more and more using the phrase "socialist humanism" to denote the moral, spiritual, and cultural development superimposed on the material base. Power-

ful institutional mechanisms are being developed to carry out the indoctrination and conditioning process, especially the so-called "boarding schools" which are already training 600,000 students per year and are intended to become universal.

Even the medium of "science fiction" which played an important role in conditioning the Soviet population to the advent of the space era is now being applied to inculcating the ideal of the "new Communist man." He is painted in almost superhuman stature as one who achieves "freedom" through the "recognition of necessity," a glowing individual whose high personal fulfillment lies in the combination of socially useful work, with maximum development of the cultural side - art, letters, etc. The enthusiasm of the Soviet leaders for this utopian vision goes so far that hard-headed science executives and theorists are now talking of the superseding of historical determinism by cybernetics.[1]

With this breathtaking thought, we come to the burning question of concern to any American scientific research group - Can our free system match the projected achievements of the Communists? I can only give a layman's answer, but I would say, on the basis of the attitude and temper of our society during the past ten years, that unless this is changed in the coming decade the answer is likely to be "no." We are confronted with a challenge which is hard and inescapable. We can no longer afford any luxury of complacency.

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[1] Note Berg in Voprosy Filosofii No. 2, 1961, "Cybernetics and National Planning."

POSTSCRIPT

Since the delivery of the speech outlined in this paper, there has been announced a far-reaching reorganization of scientific research in the Soviet Union, including the creation of a top controlling and coordinating body with a single director. Whether by design or coincidence, the joint decree of the CPSU Central Committee and the Council of Ministers was published in the USSR on the same day that Yuri Gagarin was reported to have completed man's first flight into space.

The new top body is known as the State Committee of the USSR Council of Ministers for Coordination of Research. It is officially stated to represent a "radical reorganization of the work of scientific research institutions." It will stand above the Soviet Academy of Sciences and all other scientific bodies, although the Academy will remain intact. Apparently the Soviet leaders feel that experience has shown that the Academy could not function as the general administrative and monitoring body over the various scientific institutes and at the same time do an effective job of solving the "long range problems of science." Moreover, there are large areas of scientific research in the industries and academic laboratories of the Soviet Union which have never been under the control of the Academy but which are now to be coordinated by the new agency.

The reorganization seems to mean that henceforth all long-term scientific and technological planning and research are to be carried out under one command. The encompassing scope of this command may be judged by the fact that it is to cover all research and application of "all the natural sciences and the humanities."

The establishment of a new control body marks a break with a doctrine-bound past in which academic "pigeonholing" of various scientific disciplines tended to prevent a coordinated or organic approach which could pull together, for instance, mathematics, the physical sciences, and economics in order to achieve better planning of the Soviet economy. The example of American industry is often cited by the Soviets as illustrating the need for the application of more modern scientific methods to the needs of industry. Undoubtedly the recent Soviet emphasis on cybernetics has been a large factor in pointing the way to a more integrated approach.

The head of the new agency is Lieutenant General Mihail V. Khrunichev, whose previous posts have included First Deputy Chief of the Soviet atomic energy project, Deputy Chairman of Gosplan, Deputy Peoples Commissar of the aviation industry before and during World War II, and Minister of the Aviation Industry (1946-53).